

**Pleated polyethersulfone membrane filter elements for clear and sterile filtration of liquids with the lowest possible differential pressure.**

Donaldson® Ultrasulfomem® PF-PES membrane filter elements, constructed with hydrophilic polyethersulfone membranes and all polypropylene components exhibit both enhanced throughput and reliable particle retention for superior performance in many applications. PF-PES filter elements are compatible with a broad range of chemicals and pH extremes. The low protein binding characteristics of polyethersulfone membranes ensure that PF-PES filter elements are suitable for a variety of beverage, chemical and pharmaceutical applications.

Constructed using thermal welding techniques, PF-PES filter elements do not contain any adhesives or additives and individual integrity testing assures that PF-PES filter elements meet the exacting performance requirements of our customers.



**Ultrasulfomem PF-PES**

## APPLICATIONS

Ultrasulfomem PF-PES filter elements are designed and developed for the following industries and applications:

- Inks and dyes
- Pharmaceutical preparations
- Acids, bases & oxidants
- Serums and tissue culture media
- Process water

## DIMENSIONS & SPECIFICATIONS

| MATERIALS             |                                       |
|-----------------------|---------------------------------------|
| Filter Media          | Hydrophilic Polyethersulfone Membrane |
| Support Layers        | Polypropylene Microfiber              |
| Core and Cage         | Polypropylene                         |
| End Caps and Adapters | Polypropylene                         |

| DIMENSIONS                            |  |
|---------------------------------------|--|
| Nominal O.D                           | 2.75 in.                                   |
| Nominal I.D                           | 1.25 in.                                   |
| Effective Filtration Area             | 9.0 ft <sup>2</sup>                        |
| OPERATIONAL LIMITS                    |  |
| Maximum forward differential pressure | 60 psid (4.1 bar)                          |
| Maximum reverse differential pressure | 30 psid (2.1 bar)                          |
| Maximum operating temperature         | 180°F (82°C) at 10 psid (0.7 bar) in water |

# ULTRASULFOMEM® PF-PES

## INTEGRITY TESTING

Air diffusion per 10-inch module after saturation with clean water

| Pore Size Rating | Specification                           |
|------------------|---|
| 0.1 µm           | ≤ 2.75 cu.in./min. at 50 psig (3.4 bar) |
| 0.2 µm           | ≤ 1.16 cu.in./min. at 30 psig (2.1 bar) |
| 0.45 µm          | ≤ 0.98 cu.in./min. at 20 psig (1.4 bar) |
| 0.65 µm          | ≤ 0.73 cu.in./min. at 13 psig (0.9 bar) |

## AVAILABLE ABSOLUTE MICRON RATING

0.04, 0.1, 0.2, 0.45 and 0.65 microns

## ADDITIONAL INFORMATION

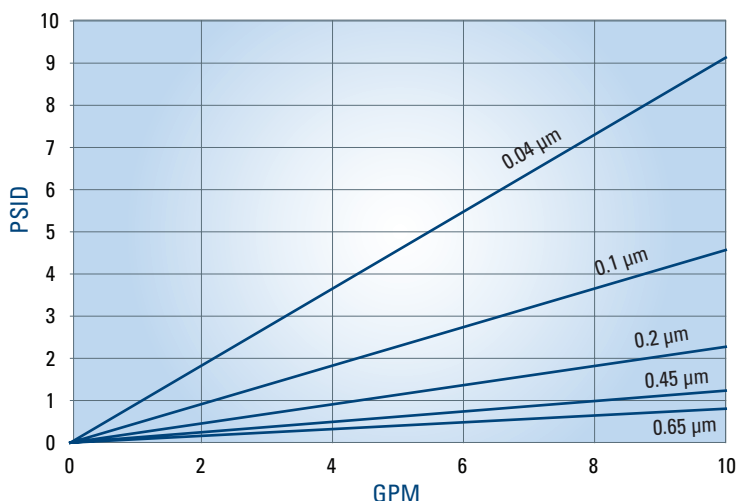
Ultrasulfomem PF-PES membrane filter elements may be autoclaved (250°F/121°C, 30 minute cycles) or in-situ steam sterilized (275°F/135°C, 30 minute cycles) for a maximum accumulated exposure of 10 hours. Alternatively, the filters may be sanitized with compatible chemical agents.

Donaldson certifies that the media used in its pleated filters meet the U.S. FDA requirements for processing beverage foods at up to 95°F, excepting distilled alcoholic beverages. Ultrasulfomem PF-PES filter elements meet the test criteria for USP Class VI-250°F Plastics and pass the MEM Elution Cytotoxicity Test.

Aqueous extracts from Ultrasulfomem PF-PES filter elements contain less than 0.25 EU/ml. The filters typically exhibit low levels of non-volatile residues.

These membrane filter elements are designed and manufactured for resistance to a wide range of chemical solutions. Conditions will vary with each application and users should carefully verify chemical compatibility.

**PF-PES Differential Pressure  
Per Ten Inch Equivalent (TIE) — Water**



## ORDERING INFORMATION

| Base Model                                   |              |                        |         |
|--|--------------|------------------------|---------|
| Number 1C-PF-PES-(Length Code)-(Rating Code) |              |                        |         |
| Example: 1C-PF-PES-P7-L3-M01                 |              |                        |         |
| Element Length                               |              | Absolute Micron Rating |         |
| Code   | Length (in.) | Code                   | Rating  |
| L05  | 5            | M004                   | 0.04 µm |
| L1   | 10           | M01                    | 0.1 µm  |
| L2   | 20           | M02                    | 0.2 µm  |
| L3   | 30           | M045                   | 0.45 µm |
|  |              | M065                   | 0.65 µm |

## STANDARD ELEMENT CONFIGURATION\*

|                    |  |
|--------------------|--|
| End #1 Adapter     | 2 x 226 O-Ring                           |
| End #2 Adapter     | Fin                                      |
| Elastomer Material | EPDM (0.04 µm)<br>Silicone (0.1-0.65 µm) |

\*Other configurations available upon request



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